

Application No. 09/724,467  
Amendment Under 37 CFR §1.312 dated May 24, 2004  
Reply to Notice of Allowance March 3, 2004

**Listing of Claims:**

1-57: (Canceled)

58. (Previously Presented) A method of prophylaxis of Alzheimer's disease in a mammalian subject, comprising: administering to the subject a dosage of synuclein-NAC effective to produce an immune response comprising anti-synuclein antibodies and an adjuvant that augments the immune response to the synuclein, wherein said administering further comprises administering an immunogenic A $\beta$  fragment, thereby effecting prophylaxis of Alzheimer's disease.

59. (Canceled)

60. (Previously Presented) The method of claim 58, wherein said adjuvant is selected from the group consisting of STIMULON QS-21, 3 De-O-acylated-monophosphoryl lipid A, and alum.

61. (Previously Presented) The method of claim 58, wherein said immune response is characterized by a serum titer of the anti-synuclein antibodies of at least 1:1000 with respect to synuclein.

62. (Previously Presented) The method of claim 61, wherein said serum titer of the anti-synuclein antibodies is at least 1:5000 with respect to synuclein.

63. (Previously Presented) The method of claim 58, wherein said immune response is characterized by a serum titer of anti-synuclein antibodies corresponding to greater than about four times higher than a serum titer of anti-synuclein antibodies measured in a pre-treatment control serum sample.

64. (Previously Presented) The method of claim 63, wherein said serum titer of the antibodies is measured at a serum dilution of about 1:100.

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65. (Previously Presented) A method of treating Alzheimer's disease in a mammalian subject, comprising administering to the subject a dosage of synuclein-NAC effective to produce an immune response comprising anti-synuclein antibodies and an adjuvant that augments the immune response to the synuclein, wherein said administering further comprises administering an immunogenic A $\beta$  fragment, and thereby treating the disease.

66. (Previously Presented) The method of claim 65, wherein said synuclein-NAC is linked to a carrier molecule to form a conjugate.

67. (Previously Presented) The method of claim 65, wherein said adjuvant is selected from the group consisting of STIMULON QS-21, 3 De-O-acylated-monophosphoryl lipid, and alum.

68. (Previously Presented) The method of claim 65, wherein said immune response is characterized by a serum titer of the anti-synuclein antibodies of at least 1:1000 with respect to synuclein.

69. (Previously Presented) The method of claim 68, wherein said serum titer of the anti-synuclein antibodies is at least 1:5000 with respect to synuclein.

70. (Previously Presented) The method of claim 65, wherein said immune response is characterized by a serum titer of anti-synuclein antibodies corresponding to greater than about four times higher than a serum titer of anti-synuclein antibodies of measured in a pre-treatment control serum sample.

71. (Previously Presented) The method of claim 70, wherein said serum titer of the anti-synuclein antibodies is measured at a serum dilution of about 1:100.

72. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 1-3.

73. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 1-4.

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74. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 1-5.

75. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 1-6.

76. (Canceled)

77. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 3-7.

78. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 1-10.

79. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 1-12.

80. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 13-28.

81. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 25-35.

82. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is A $\beta$ 33-42.

83. (Previously Presented) The method of claim 58, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

84. (Previously Presented) The method of claim 72, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

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85. (Previously Presented) The method of claim 73, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

86. (Previously Presented) The method of claim 74, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

87. (Previously Presented) The method of claim 75, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

88. (Canceled)

89. (Previously Presented) The method of claim 77, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

90. (Previously Presented) The method of claim 78, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

91. (Previously Presented) The method of claim 79, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

92. (Previously Presented) The method of claim 80, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

93. (Previously Presented) The method of claim 81, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

94. (Previously Presented) The method of claim 82, wherein said A $\beta$  fragment is linked to a carrier molecule to form a conjugate.

95. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 1-3.

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96. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 1-4.

97. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 1-5.

98. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 1-6.

99. (Canceled)

100. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 3-7.

101. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 1-10.

102. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 1-12.

103. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 13-28.

104. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 25-35.

105. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is A $\beta$ 33-42.

106. (Previously Presented) The method of claim 65, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

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107. (Previously Presented) The method of claim 95, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

108. (Previously Presented) The method of claim 96, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

109. (Previously Presented) The method of claim 97, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

110. (Previously Presented) The method of claim 98, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

111. (Canceled)

112. (Previously Presented) The method of claim 100, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

113. (Previously Presented) The method of claim 101, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

114. (Previously Presented) The method of claim 102, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

115. (Previously Presented) The method of claim 103, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

116. (Previously Presented) The method of claim 104, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

117. (Previously Presented) The method of claim 105, wherein said A $\beta$  fragment is linked to a carrier to form a conjugate.

118. (Previously Presented) The method of claim 58, wherein the subject has a known genetic risk of Alzheimer's disease.

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119. (Previously Presented) The method of claim 65, wherein the subject has a known genetic risk of Alzheimer's disease.